

## ABSTRACT OF THE DISCLOSURE

5 A honeycomb structure with a plurality of flexible material strips which are arranged  
next to one another and are connected to one another is presented. The material strips have a  
corrugated shape with U-shaped cross section of essentially straight, vertical partial areas (3)  
and curved, horizontal partial areas (2). The material strips are connected to one another at  
10 contact points (4) of the straight, vertical partial areas. In addition, a device for manufacturing  
a honeycomb has welding sections (6). The flexible material strips (9) are guided by the  
welding sections (6), where the material strips are welded to one another by means of a comb-  
like finger system (10). The finger system or the welding sections are laterally displaced by  
two sections and by a pressing operation taking place between the finger and the welding  
15 section. This presses two material strips onto a heated welding wire (7), which leads to the  
thermal connection of the material strips.